

CLAIMS

What is claimed is:

1. An electrical connector comprising:

a frame having a receiving area which is sized and shaped to removably receive an end of at least one electronic module;

electrical contacts connected to the frame, the contacts comprising spring contacts adapted to make removable connection to contact pads on the end of the electronic module at a mated inserted position; and

an ejecting system for ejecting the at least one electronic module with the electrical contacts, the ejecting system comprising at least one ejection unit having a spring, a pusher and a guide connected between the frame and a guide channel in the pusher, and wherein the ejection unit and frame are adapted to stationarily locate the pusher at two positions on the frame based upon biasing force of the spring and upon location of the guide in the guide channel.

2. An electrical connector as in claim 1 wherein the frame is adapted to receive two of the electronic modules in a side-by-side configuration.

3. An electrical connector as in claim 2 wherein the ejecting system comprises two of the ejection units located at opposite sides of the receiving area.

4. An electrical connector as in claim 1 further comprising a control and support spring connected to the

frame and extending into the receiving area from a rear end of the receiving area, wherein the control and support spring is adapted to be deformed by the electronic module only when a front end of the electronic module is inserted past a mated inserted position in the receiving area.

5. An electrical connector as in claim 1 wherein the guide channel comprises a general loop shape with extensions extending off of the general loop shape.

6. An electrical connector as in claim 5 wherein the general loop shape comprises a detent section forming a seat for holding a portion of the guide thereat.

7. An electrical connector as in claim 5 wherein the guide comprises a rod having a first end pivotably connected to the frame and a second end slideably located in the guide channel.

8. An electrical connector as in claim 1 wherein the ejecting system comprises only one ejection unit located at a lateral side of the receiving area.

9. An electrical connector as in claim 1 wherein the guide track is sized and shaped to cooperate with the guide to form a latch for the pusher at a mated position of the electronic module in the receiving area.

10. An electrical connector comprising:

a frame having a receiving area which is sized and shaped to removably receive an end of at least one electronic module;

electrical contacts connected to the frame, wherein the electrical contacts are adapted to make removable connection with contacts on an electronic module inserted into the receiving area; and

an ejecting system for ejecting the electronic module from connection with the electrical contacts, wherein the ejecting system comprises a spring, a pusher connected to the spring and adapted to push against the electronic module, and a movable guide connected to the frame, wherein the pusher comprises a guide track, wherein the guide extends into the guide track, wherein the guide track is sized and shaped to cooperate with the guide to form a latch for the pusher at a mated position of the electronic module into the receiving area, and wherein in the mated position the electrical contacts make electrical connection with the electronic module and the latch prevents the spring from exerting a force against the electronic module.

11. An electrical connector as in claim 10 wherein the receiving area of the frame is adapted to receive two of the electronic modules in a side-by-side configuration.

12. An electrical connector as in claim 11 wherein the ejecting system comprises two ejection units located at opposite sides of the receiving area.

13. An electrical connector as in claim 10 further comprising a control and support spring connected to the frame and extending into the receiving area from a rear end of the receiving area, wherein the control and support spring is adapted to be deformed by the electronic module only when the end of the electronic

module is inserted past the mated position in the receiving area.

14. An electrical connector as in claim 10 wherein the guide channel comprises a general loop shape with extensions extending off of the general loop shape.

15. An electrical connector as in claim 14 wherein the general loop shape comprises a detent section forming a seat for holding a portion of the guide thereat.

16. An electrical connector as in claim 14 wherein the guide comprises a rod having a first end pivotably connected to the frame and a second end slideably located in the guide channel.

17. An electrical connector as in claim 10 wherein the ejecting system comprises only one ejection unit comprising the spring, the pusher and the guide located at a lateral side of the receiving area.

18. An electrical connector comprising:

a frame having a receiving area which is sized and shaped to removably receive a front end of at least one electronic module;

electrical contacts connected to the frame, wherein the electrical contacts are adapted to make removable connection with contacts on an electronic module inserted into the receiving area;

a control and support spring connected to the frame and extending into the receiving area from a rear end of the receiving area, wherein the control and support spring is adapted to be deformed by the

electronic module only when a first side of the front end of the electronic module is inserted past a mating position in the receiving area; and

a latchable ejecting unit connected to the frame comprising a spring, a pusher biased by the spring between an un-mated ejection position and an over-moved end position, and a latching system to latch the pusher at an intermediate latched position, wherein the pusher is contacted by the electronic module at a second side of the front end of the electronic module to move the pusher.

19. An electrical connector as in claim 18 wherein the frame is adapted to receive two of the electronic modules in a side-by-side configuration.

20. An electrical connector as in claim 19 wherein the connector comprises two of the latchable ejecting units located at opposite sides of the receiving area.

21. An electrical connector as in claim 18 wherein the guide channel comprises a general loop shape with channel extensions extending off of the general loop shape.

22. An electrical connector as in claim 21 wherein the general loop shape comprises a detent section forming a seat for holding a portion of the guide thereat.

23. An electrical connector as in claim 18 wherein the guide comprises a rod having a first end pivotably connected to the frame and a second end slideably located in the guide channel.

24. An electrical connector as in claim 18 wherein the guide track is sized and shaped to cooperate with the

guide to form the latching system to latch the pusher at a mated position of the electronic module into the receiving area

25. A method of connecting an electronic module to an electrical connector comprising steps of:

inserting the electronic module into a receiving area of the electrical connector;

pushing a pusher of the electrical connector by the electronic module from an un-mated ejection position to an over-moved end position; and

moving the electronic module by the pusher from an over-inserted first inserted position to a mated second inserted position with the pusher being moved at an intermediate latched position, wherein to move the electronic module from the mated position to a partially ejected position by the pusher the pusher is moved from the intermediate latched position to the over-moved end position to allow the pusher to return to the un-mated ejection position and push the electronic module outward to the partially ejected position.